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CUSTOMER NUMBER 25268

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Yager et al. Attorney Docket No. UNIV0238  
Serial No.: 10/788,884 Group Art Unit: 2858  
Filed: February 27, 2004 Examiner:  
Title: MICROFLUIDIC DEVICES FOR TRANSVERSE ELECTROPHORESIS AND  
ISOELECTRIC FOCUSING

INFORMATION DISCLOSURE STATEMENT

Bellevue, Washington 98004

November 21, 2005

TO THE COMMISSIONER FOR PATENTS:

Applicant is aware of the information listed in the attached form that may be material to the prosecution of the above-identified patent application.

- ☐ 1. Copies of the listed Foreign Patent Documents and Other Information are enclosed for the Examiner's use.
- ☒ 2. Copies of the listed patents, publications, and other information were previously cited by or submitted to the U.S. Patent and Trademark Office in prior application Serial No. 09/579,666, filed May 26, 2000, and relied upon for an earlier filing date under 35 U.S.C. § 120.
- ☐ 3. Documents cited herein marked with an "\*\*\*" have not previously been cited in a priority application relied upon herein for an earlier filing date. Copies of any so-noted Foreign Patent Documents and Other Information are enclosed for the Examiner's use.
- ☐ 4. A concise explanation of the relevance of document I.D. No. \_\_\_\_\_ (which is not in the English language), as presently understood by the individual designated under 37 C.F.R. § 1.56(c) most knowledgeable about its content, is provided \_\_\_\_\_.
- ☒ 5. Pursuant to 37 C.F.R. § 1.97(b), this information disclosure statement is being filed within three months of the filing date of the national application, within three months of the date of entry of the national stage as set forth in 37 C.F.R. § 1.491 in an international application, or before the mailing date of a first Office Action on the merits.
- ☐ 6. Submission with RCE: Pursuant to 37 C.F.R. § 1.114, this information disclosure statement is being submitted concurrently with a Request for Continued Examination

(RCE) in the above-identified application.

7. Pursuant to 37 C.F.R. § 1.97(c), this information disclosure statement is being filed after the period set forth in 37 C.F.R. § 1.97(b) but before the mailing date of either a final action under 37 C.F.R. § 1.113, or a notice of allowance under 37 C.F.R. § 1.311, and is accompanied by:

- a. \_\_\_\_\_ a certification as specified in 37 C.F.R. § 1.97(e); or
- b. \_\_\_\_\_ the fee set forth in 37 C.F.R. § 1.17(p). Check No. \_\_\_\_\_ in the amount of \$ \_\_\_\_\_ is enclosed.

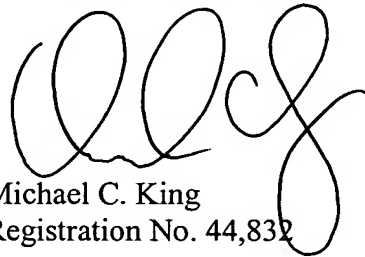
8. Pursuant to 37 C.F.R. § 1.97(d), this information disclosure statement is being filed after the mailing date of either:

- a. \_\_\_\_\_ a final action under 37 C.F.R. § 1.113; or
- b. \_\_\_\_\_ a notice of allowance under 37 C.F.R. § 1.311,

but before payment of the issue fee. The statement is accompanied by a certification as specified in 37 C.F.R. § 1.97(e), a statement requesting consideration of the information disclosure statement, and the petition fee set forth in 37 C.F.R. § 1.17(p). Check No. \_\_\_\_\_ in the amount of \$ \_\_\_\_\_ is enclosed.

X 9. Please charge any additional fees or credit any overpayment to Deposit Account No. 01-1940. A copy of this sheet is enclosed.

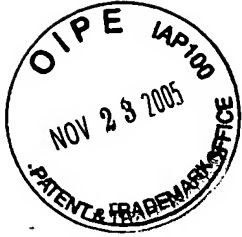
Respectfully submitted,



Michael C. King  
Registration No. 44,832

I hereby certify that this correspondence is being deposited with the U.S. Postal Service in a sealed envelope as first class mail with postage thereon fully prepaid addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450, on November 21, 2005.

Date: November 21, 2005



**CUSTOMER NUMBER 25268**

**INFORMATION DISCLOSURE STATEMENT LISTING SHEET**

**Information Cited By Applicant(s) That May Be Material To  
The Prosecution Of The Subject Application**

Applicants: Yager et al. Attorney Docket No. UNIV0238  
Serial No.: 10/788,884 Group Art Unit: 2858  
Filed: February 27, 2004 Examiner:  
Title: MICROFLUIDIC DEVICES FOR TRANSVERSE ELECTROPHORESIS AND  
ISOELECTRIC FOCUSING

**U.S. PATENT DOCUMENTS**

<u>*Examiner Initial</u>	<u>ID</u>	<u>Document No.</u>	<u>Date</u>	<u>Inventor Name(s)</u>	<u>Class</u>	<u>Sub- Class</u>
	US1	6,136,272	10/24/00	Weigl et al.	422	82.05
	US2	6,067,157	05/23/00	Altendorf	356	337
	US3	6,007,775	12/28/99	Yager	422	57
	US4	5,974,867	11/02/99	Forster	73	61.41
	US5	5,972,710	10/26/99	Weigl et al.	436	34
	US6	5,971,158	10/26/99	Yager et al.	209	155
	US7	5,948,684	09/07/99	Weigl et al.	436	52
	US8	5,932,100	08/03/99	Yager et al.	210	634
	US9	5,922,210	07/13/99	Brody et al.	210	767
	US10	5,748,827	05/05/98	Holl et al.	385	134
	US11	5,747,349	05/05/98	Van den Engh et al.	436	172
	US12	5,726,751	03/10/98	Altendorf et al.	356	246
	US13	5,726,404	03/10/98	Brody	200	81R
	US14	5,716,852	02/10/98	Yager et al.	436	172
	US15	5,630,924	05/20/97	Fuchs et al.	204	601
	US16	4,737,268	04/12/98	Giddings	209	12
	US17	5,800,690	09/1998	Chow et al.	204	451
	US18	5,750,015	05/1998	Soane et al.	204	454
	US19	5,837,115	11/1998	Austin et al.	204	450
	US20	6,221,654	04/2001	Quake et al.	435	287.3
	US21	6,387,707	05/2002	Seul et al.	436	164
	US22	6,294,063	09/2001	Becker et al.	204	450
	US23	6,368,871	04/2002	Christel et al.	436	180
	US24	6,171,466	01/2001	Rhodes	204	600

## U.S. PATENT DOCUMENTS

<u>*Examiner Initial</u>	<u>ID</u>	<u>Document No.</u>	<u>Date</u>	<u>Inventor Name(s)</u>	<u>Class</u>	<u>Sub- Class</u>
_____	US25	6,277,258	08/2001	Ivory et al.	204	450
_____	US26	5,993,632	10/2000	Frazier	204	450
_____	US27	5,993,632	11/1999	Becker et al.	204	547

## FOREIGN PATENT DOCUMENTS

<u>*Examiner Initial</u>	<u>ID</u>	<u>Document No.</u>	<u>Publication Date</u>	<u>Country</u>	<u>Class</u>	<u>Sub- Class</u>	<u>Translati on?</u>
_____	F1	WO99/60397	10/25/99	PCT	G01N33/483		
_____	F2	WO99/17119	04/08/99	PCT	G01N33/543		
_____	F3	WO98/43066	10/01/98	PCT	G01N15/14		
_____	F4	WO99/19717	4/22/99	PCT	G01N27/26		
_____	F5	WO94/11728	5/26/94	PCT	G01N		
_____	F6	WO95/17950	7/6/95	PCT	B01D		

## OTHER INFORMATION

<u>*Examiner Initial</u>	<u>Document No.</u>	<u>Document Information</u>
_____	O1	Baygents et al., (1997), "Recycling electrophoretic separations: modeling of isotachnophoresis and isoelectric focusing," J. Chromatog. A 779: 165-183.
_____	O2	Bier et al., (Mar 1983), "Electrophoresis: Mathematical Modeling and Computer Simulation," Science 219(4590): 1281-87.
_____	O3	Brody et al., (Dec 1996), "Biotechnology at Low Reynolds Numbers," Biophys. J. 71: 3430-3441.
_____	O4	Brody, J. and Yager, P., (1997), "Diffusion-based extraction in a microfabricated device," Sensors and Actuators A (Physical) 58: 13-18.
_____	O5	Caldwell et al., (Apr 1972), "Electrical Field-Flow Fractionation of Proteins," J. Sci. 176: 296-98.
_____	O6	Chmelik, J., (1991), "Isoelectric focusing field-flow fractionation: Experimental study of the generation of pH gradient," J. Chromatog. 539: 111-121.
_____	O7	Chmelick, J., (June 1991), "Isoelectric focusing field-flow fractionation. II. Experimental study of focusing of methyl red in the trapezoidal cross-section channel," J. Chromatog. 545(2): 349-58.
_____	O8	Chmelik, J. and Thormann, W., (1992), "Isoelectric focusing field-flow fractionation: III. Investigation of the influence of different experimental parameters on focusing of cytochrome c in the trapezoidal cross-section channel," J. Chromat. 600: 297-304

## OTHER INFORMATION

*Examiner Initial	Document No.	Document Information
_____	O9	Chmelik, J. and Thormann, W., (1992), "Isoelectric focusing field-flow fractionation: IV. Investigations on protein separations in the trapezoidal cross-section channel," J. Chromat. 600: 305-311.
_____	O10	Corstiens et al., (1996), "Variation of the pH of the background electrolyte due to electrode reactions in capillary electrophoresis: Theoretical approach and in situ measurement," Electrophoresis 17: 137-43.
_____	O11	Effenhauser et al., (Sept 1997), "Integrated Capillary Electrophoresis on flexible Silicone Microdevices: Analysis of DNA Restriction Fragments and Detection of Single DNA Molecules on Microchips, " Anal. Chem. 69(17): 3451-3457.
_____	O12	Evans, L. and Burns, M., (Jan 1995), "Solute Focusing Techniques for Bioseparations, " Bio/Techn. 13: 46-62.
_____	O13	Fintschenko, Y. and Van den Berg, A., (1998), "Silicon microtechnology and microstructures in separation science, " J. Chrom. A 819: 3-12.
_____	O14	Fuh, C. and Giddings, J., (1997), "Isoelectric Split-Flow Thin (Splitt) Fractionation of Proteins, " Sep. Sci. Tech. 32(18): 2945-2967.
_____	O15	Raymond, D E et al, "Continuous Sample Pretreatment Using Free-Flow Electrophoresis Device Integrated onto a Silicon Chip." Analytical Chemistry, American Chemical Society. Columbus, US, Vol. 66, No.18, Sept. 1994: 2858-2865.
_____	O16	Hofman. "Adaption of Capillary Isoelectric Focusing to Microchannels on a Glass Chip." Analytical Chemistry, American Chemical Society. Columbus, US, Vol. 71, 1999: 678-686.

\_\_\_\_\_  
Examiner's Signature

\_\_\_\_\_  
Date

\*Examiner: Initial if reference considered, whether or not citation is in conformance with M.P.E.P. § 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

\*\*Documents cited herein marked with an "\*\*\*" have not previously been cited in a priority application relied upon herein for an earlier filing date. Copies of any so-noted Foreign Patent Documents and Other Information are enclosed for the Examiner's use.

RMA:cai  
11/21/05